
Learning European history and geography in a multicultural and ICT perspective

Francisco J. García-Peñalvo*

Computer Science Department/Research Institute of Educational Sciences/GRIAL Research Group,
Faculty of Sciences,
University of Salamanca,
Plaza de los Caídos, S/N, 37008, Salamanca, Spain
E-mail: fgarcia@usal.es
*Corresponding author

Valentina Zangrando,
Antonio M. Seoane Pardo,
Alicia García Holgado and Evaristo Ovide

GRIAL Research Group, Research Institute of Educational Sciences,
University of Salamanca
Paseo de Canalejas, 169, 37008, Salamanca, Spain
E-mail: vzangra@usal.es
E-mail: aseoane@usal.es
E-mail: aliciagh@usal.es
E-mail: evaristo_ovide@usal.es

Abstract: Despite official educational guidelines, improved linguistic skills have been limited in all partner countries due to cuts in their national budgets. As a consequence, fewer CLIL experiences have been supported, to the benefit of those involving English. Another reason for this project resides in the difficulty in modifying the guidelines of national programmes, which are often short-sighted as far as other cultures are concerned. Finally, all European reports point out the shortage of materials and ICT-based contents suitable for interdisciplinary and multicultural education at school. The Multicultural Interdisciplinary Handbook (MIH) project meets these needs by providing new tools that will help teachers and pupils to plunge deeper into the culture and the language of another nation via its history and its landscape/geography. Moreover, it intends to promote a common European identity, as it introduces a European perspective in the schools' History and Geography syllabuses, which are usually limited to national borders.

Keywords: history and geography; CLIL; ICT; learning objects; multicultural perspectives; eLearning; Europe.

Reference to this paper should be made as follows: García-Peñalvo, F.J., Zangrando, V., Seoane Pardo, A.M., Holgado, A.G. and Ovide, E. (2011) 'Learning European history and geography in a multicultural and ICT perspective', *Int. J. Technology Enhanced Learning*, Vol. 3, No. 4, pp.343–354.

Biographical notes: Francisco J. García-Peñalvo received his PhD in Computer Science from University of Salamanca, Spain in 2000. He works as a Lecturer at the Computer Science Department of the University of Salamanca. He is the research GRoup in InterAction and eLearning (GRIAL) Director. His main research interests are eLearning, computer and education, adaptive systems, web engineering, semantic web, and software reuse. He was a member of the Technologic and Academic Committee of the White Book for Digital University 2010. He was the Technology Innovation Vice-Rector of the University of Salamanca from March 2007 to December 2009 and the President of the Technical Committee of the SCOPEO observatory, an observatory for eLearning activity, innovation and trends, from its beginning until December 2009. He has more than 100 published papers in international journals and conferences.

Valentina Zangrando was the first project Leader of the Virtual University of the University of Salamanca and is now an active member of the GRIAL group, where she is involved in project management. She collaborates with several international training initiatives and she was the main authoress and the Academic Coordinator of an ALFA – MIFORCAL Project (UE). As a Project Manager, she planned or managed several EU Projects: EMMET, MIH Comenius, etc. She participates as a Researcher in an ELVIN EU Project and many other national and/or regional projects.

Antonio Miguel Seoane Pardo is an Academic Coordinator and active Researcher of the GRIAL research group in the fields of online training methodology and strategic design of virtual institutions. He is a Philosophy Teacher in a secondary school and collaborates with several international training and research initiatives. He is the author of several articles regarding eLearning, online training methodology, communication theory and ancient Greek philosophy and rhetoric.

Alicia García Holgado has a Master's degree in Computer Science and is a young member of GRIAL Research Group, where she is specialised in semantic web and learning objects development. She leads the technical development of learning contents in GRIAL Group.

Evaristo Ovide received his BA in English Language and Linguistics and a Postgraduate Diploma in Asturian Language and Literature both from the University of Oviedo, Spain; an MSc with distinction in Computing and Information Systems from University of Ulster, Ireland; an MA in eLearning from University of Santiago de Compostela, Spain; and is currently a PhD candidate at the University of Salamanca, where he also works as a Computer Technician at the Research Institute of Educational Sciences as a translator in different projects of the GRIAL research group. His research interests are eLearning, home schooling and the application of the new technologies to save endangered languages and cultures, as well as to promote social change.

1 Introduction

Since the Treaty of Rome, which would give birth to the European Economic Community, was signed in 1957, a European identity has been sought in an effort to involve all the different members. However, differences in cultures, languages, history, etc. make this task a difficult one.

Following Welsch's (1999) concept of 'multiculturality', it could be said that the European Union is a multicultural scenario where problems resulting from multiple cultures having to coexist within the framework of a Society have to be tackled when they arise.

The challenge lies in changing the idea of cultures as isolated entities or islands (Herder, 1966) to achieve a better coexistence and cooperation, overcoming frontiers and facilitating mixing of cultures as a clear example of 'transculturality'.

The European Project MIH (Multicultural Interdisciplinary Handbook) (Zangrando et al., 2010) is born under these premises. It aims at facilitating the creation of that European identity by designing digital educational contents, related to the subjects of geography and history, which will be built from a multicultural point of view.

The present article will define in detail the MIH Project (Section 2). It will describe the LO model necessary to create digital educational contents from a multicultural point of view (Section 3). Then, a first prototype of learning environment will be presented (Section 4). Finally, some conclusions will be drawn describing the progress made in the first steps of the project (Section 5).

2 MIH project overview

The aim of the MIH project is to build and share a set of tools that includes a handbook, digital modules and a teacher training course. They will offer a structured path through European contemporary history and geography of the countries involved as project partners.

Nowadays, it is generally national guidelines that determine school programmes; school handbooks and didactics are based upon them. Going beyond the limits of the national programmes, and furthering the understanding amongst young people and their educators of the diversity of European culture, languages and values is the principal objective of the Comenius European Programme. We plan to operate at the level of handbooks and Didactics. The main purpose of the entire MIH project is to offer a tool for studying events through an approach that is both comparative and interdisciplinary: historical content will be organised based on underlying geographical realities dealing with such topics as borders, migrations, landscape and resources.

The cooperative work of selecting and drawing up the key topics, a major activity of the project's core members, will provide the materials for designing a training course addressing current and future teachers that will emphasise the European dimension in teacher training.

The handbook, available in the five languages of the partnership plus English, can be used both by teachers interested in multicultural learning as well as by those involved in CLIL projects (Eurydice, 2006). In the latter case, teachers will have at their disposal a consistent path, the original documents and a general methodology that recent reports have shown to be missing. They will promote language learning.

The digital modules will be the final tool of the project. The modules will be available as free video podcasts, web-based contents (HTML) and standard-packaged learning objects in Shareable content object reference model (SCORM) (Jesukiewicz, 2009) in order to use them in any virtual learning environment, in class or for independent study by pupils; these will motivate pupils by supporting listening comprehension and oral

production and represent an important contribution to the development of digital educational content.

The project introduces at least five innovative elements in schools:

- 1 The handbook is simultaneously a learning tool and an integrated and consistent presentation of historical events related to the transformation of the territories considered, completed by a methodological analysis.
- 2 It addresses CLIL classes (or similar - a model can be seen at MOBIDIC Comenius website <http://www.mobidic.org/start.htm>) but also regular classes, and can be used whenever a teacher chooses to make pupils aware of historical events as seen from the viewpoint of other nations.
- 3 The range of countries involved, including Spain and Italy, as well as those further to the North, goes beyond that in the Franco-German handbook, which addresses bilingual regions and institutions involved in Franco-German cooperation.
- 4 The range of 'foreign' languages in which the material will be available – beyond the three most common: French, German and Spanish – may increase interest in these languages. Full support for both Italian and Polish will be provided.
- 5 The digital modules – based on selected excerpts of the Handbook – will be available as free podcasts to download. The targets are teachers, who can use them in class, and students, who can use them for independent study. Other users who currently have no equivalent materials available can also use them. As a tool, it presents a number of advantages: it can motivate students and provide practice for listening comprehension; it is well adapted for ubiquitous learning principles; it widens the potential audience and opens new paths for the exploitation of the results.

The project life is from October 2009 to September 2011. We expect to release the first beta products by September 2010. All the information and public deliverables will be online on the project's website at <http://www.mihproject.eu>. Figure 1 shows the MIH website, where all public information will be published and which also serves for internal communication among the research members.

2.1 Objectives and results expected

The main objectives of the MIH Project can be summed up as follows:

- further the development of a common European identity by having schools participating in the culture of other countries using their languages and their collective symbolic imagery
- contribute to the creation of a new generation of school Handbook and ICT-based contents that can support teachers involved in CLIL experiences, or who are simply interested in them
- implement digital educational contents in schools.

According to this, the main deliverable products or results will be:

- 1 A handbook and digital materials, which deal with a choice of historical and geographical topics, selected among those that have had an important impact in the

national imagery in the last two centuries. The final version of the handbook and Digital Modules will be available in all the languages of the partner countries.

2. A teacher training course addressed to both future and in-service teachers. The training develops the topics dealt by the handbook and explains its methodology and issues.

Figure 1 MIH homepage (<http://www.mihproject.eu>) (see online version for colours)

Multicultural Interdisciplinary Handbook

Tools for Learning History and Geography in a Multicultural Perspective

Home About MIH Work Packages Dissemination News Contact Search... Go

MIH Project Registered Users

Welcome to MIH Project website!

The aim of this Project is to build and share a set of tools that includes a Handbook, Digital Modules and a Teacher Training Course. They will offer a structured path through European Contemporary History and Geography where the countries concerned will be those of the Project partners.

MIH aims to:

- Further the development of a common European identity by having schools participate in the culture of other countries using their languages and their collective symbolic imagery
- Contribute to the creation of a new generation of school Handbook and ICT-based contents that can support teachers involved in CLIL experiences, or who are simply interested in them
- Implement digital educational contents in schools

The results will be:

1. A Handbook and Digital Materials, which deal with a choice of historical and geographical topics, selected among those that have had an important impact in the national imagery in the last two centuries. The final version of Handbook and Digital Modules will be available in all the languages of the partner countries
2. A Teacher Training Course addressed to both future and in-service teachers. The training develops the topics dealt by the Handbook and explains its methodology and issues

Partners

- Universidad de Salamanca (Spain)
- Pädagogische Hochschule Tirol (Austria)
- Häfelekar Unternehmensberatung Schober GmbH - Innsbruck (Austria)
- Institut Universitaire de Formation des Maîtres - Créteil (France)
- Universität Augsburg (Germany)
- Universität Siegen (Germany)
- Università Ca' Foscari di Venezia (Italy)
- Społeczna Wyższa Szkoła Przedsiębiorczości i Zarządzania (Poland)

Last News

- Tech-education 2010 Athens 20/05/10
- Common Framework Meeting Venezia (Italy) 15/04/10
- Kick-off Meeting Innsbruck (Austria) 8/01/10

© 2010 MIH - All rights reserved. With the support of the Lifelong Learning Programme of the European Union
This site is hosted by Grial - USAL

2.2 The consortium

The University of Salamanca leads the initiative and has well-documented experiences in international projects. It is involved via its InterAction and eLearning Research Group (GRIAL – <http://grial.usal.es>), currently focusing on the production of educational podcasts and learning objects for both eLearning and bLearning contexts.

The German Universities of Augsburg and Siegen contribute with long expertise in didactics of history in the fields of multicultural dialogue, methods and contents for teaching History in bilingual classes. They will share the responsibility for piloting the complete toolset.

The Department of History of the University of Venice contributes with scholars involved in teacher training, in history and geography methodologies and didactics. They are responsible for the state-of-the-art Studies and the Methodology for content developing.

The Polish Academy of Management has a language unit and also provides training for teachers. The academy has vast experience in managing European projects. All the staff is competent in inter-cultural education.

The trainers at the IUFM of Créteil, a public teacher-training institute currently attached to the University of Paris XII, have already developed school handbooks and participated in European cooperation (MOBIDIC project – <http://www.mobidic.org/start.htm>). They are responsible for the layout of the handbook.

Hafelekar Agency staff is responsible for the evaluation programme, dissemination and valorisation. They collaborate closely with the University of Salamanca in order to ensure the highest quality in the whole processes.

The Paedagogische Akademie of Innsbruck staff is expert in both teacher training, especially as related to the design of curricula, and language teacher training. They will design the training course.

2.3 *Impact*

The immediate beneficiaries, who will also be involved in evaluation and pilot testing, are:

- future teachers of languages, history and geography enrolled with the partner institutions
- teachers currently in service in associated schools as well as those that can be reached in the course programme.

Teachers, students and anyone interested in European multicultural issues constitute the future beneficiaries. Depending on national programmes, the project deliverables will be used with students ranging from 12 to 16 years of age.

Despite political statements and official educational guidelines illustrating a certain comprehension of the importance of mutual understanding, improved linguistic skills and ITC-based content have been severely limited in all partner countries due to cuts in their national budgets. This can be seen in the reduction of the teaching of German and French languages, and even more for other languages to the benefit of English, where governments currently concentrate their financial resources.

While we cannot influence ‘national limits’ set on school programmes, we can increase and adapt the didactic tools and make them correspond both to the goal of European integration and the desire of teachers to have available traditional and innovative classroom tools. This is precisely the objective of the MIH project, which will not only support teachers in developing interdisciplinary subjects and multi-cultural approaches, but also prepare them during their own training. They can use the hardcopy Handbook as well as the digital modules, knowing that these are available in both their ‘national language’ and the alternative ‘foreign language’, depending on the objectives they assign to their teaching. The project may participate in reviving interest for European languages other than English and contribute to redefine the contents of school programmes.

2.4 *Working plan*

The MIH project work plan consists in six main steps:

- 1 define the key topics and methodology based on comparative studies and collaborative engagement

- 2 make an initial version of the Handbook and implement quality evaluation
- 3 write the final version of the handbook in English and in the five languages of the partnership
- 4 develop a storyboard of the modules and produce the podcasts
- 5 design the teacher-training course
- 6 run a pilot study of the toolset and related quality evaluation

Six milestones have been fixed to monitor the process; the milestones correspond to the deliverables from the above steps:

- 1 study report
- 2 draft of the handbook
- 3 final English version
- 4 translations
- 5 design of the teacher-training course
- 6 production of the digital modules.

The final milestone is planned to occur 18 months after the start of the project, after which the tools will be subjected to a six-month pilot-test and quality survey in associated schools. The quality of the products will be assured by:

- 1 peer reviews
- 2 evaluations delivered by associated schools.

It is very important to ensure the quality of this education project putting a very intensive emphasis in project management, taking into account specially the following variables: organisation and logistics (Bodea et al., 2010).

3 Learning object model

In order to develop the MIH digital modules deliverable, we propose a learning object (LO) model based on the IEEE LOM (2002) different granularity characteristic for the LO. This way we can achieve a multilayer LO that will support the multicultural aspects of the digital contents.

There are different definitions of this concept (IEEE LOM, 2002; Polsani, 2003; Wiley, 2000; Moreno and Bailly-Baillièrè, 2002). In this project, we will work with the definition given by (Morales et al., 2007) in order to build LO of greater granularity, following the IEEE LOM standard. This way, a LO is defined as “a unit with a learning objective, together with digital and independent capabilities containing one or a few related ideas and accessible through metadata to be reused in different contexts and platforms”.

Morales et al. (2007) definition suggests a LO with an aggregation level 2 according to IEEE LOM standard (this means a collection of level 1 learning objects – IEEE LOM presents aggregation levels from 1 to 4).

Figure 2 shows the MIH LO model proposal. The main delivery of this project is the MIH Handbook that is mainly composed of a set of digital modules and a set of methodological guidelines.

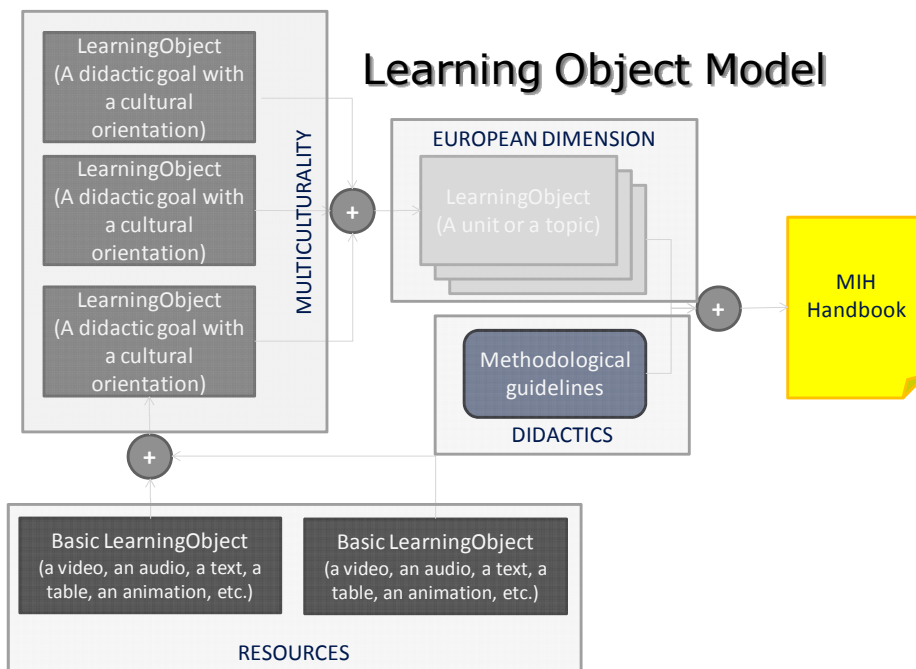
The digital modules are LO that represent a unit of a topic discussed from different cultural point of views. This means that these LO are an aggregation of a set of more basic LO that represents a unit with only one didactic goal that will be developed from a specific cultural orientation. These LO are the aggregation of a set of elementary resources that will be packaged into LO without any didactic goal.

According to this, the simpler LO, without didactic charge, have an aggregation level 1 and they represent the basic resources, such as a table, an animation or a video.

The next level, LO with only one didactic goal, introduces the multicultural support in our model because it is possible the have the same topic presented from different cultural perspectives, each one in a different LO. This means an aggregation level 2 in the LO definition.

The more complex level, with an aggregation level 3, represents the joint of several LO regarding a specific topic that introduces multiculturalism in a European dimension. These LO will be the digital modules that will be used in the real classes.

Figure 2 MIH LO model (see online version for colours)



4 A first virtual learning environment for MIH learning objects

The central element of the learning virtual environment is a map of Europe where each LO is represented as an interactive pin, which, when clicked, shows a brief technical note with the object most significant data and a link to access it.

The distribution of pins within the map of Europe depends on two factors: the country and dates in which the central theme of the object takes place. In order to show this relationship there is a timeline that, when clicked on a year, will dynamically show on the map the pins belonging to that period. At the same time, on the left of the map, a list of objects, in alphabetical order, will be shown for that period. Objects that cannot be assigned to a single country will be placed on the sea, as shown in Figure 3

Figure 3 Virtual learning environment (see online version for colours)

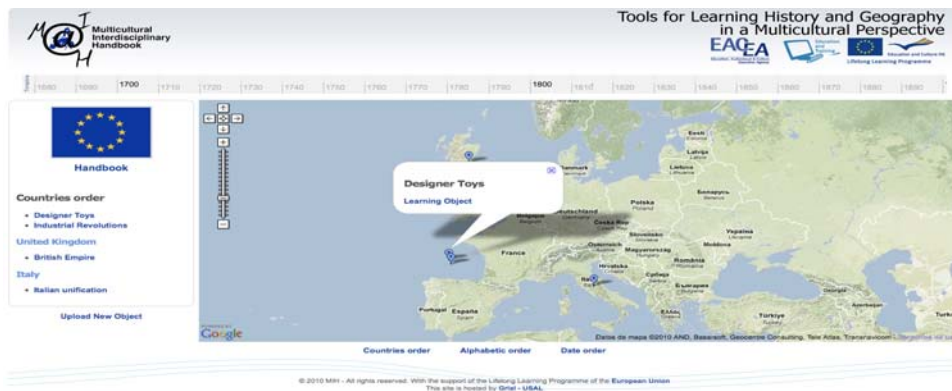
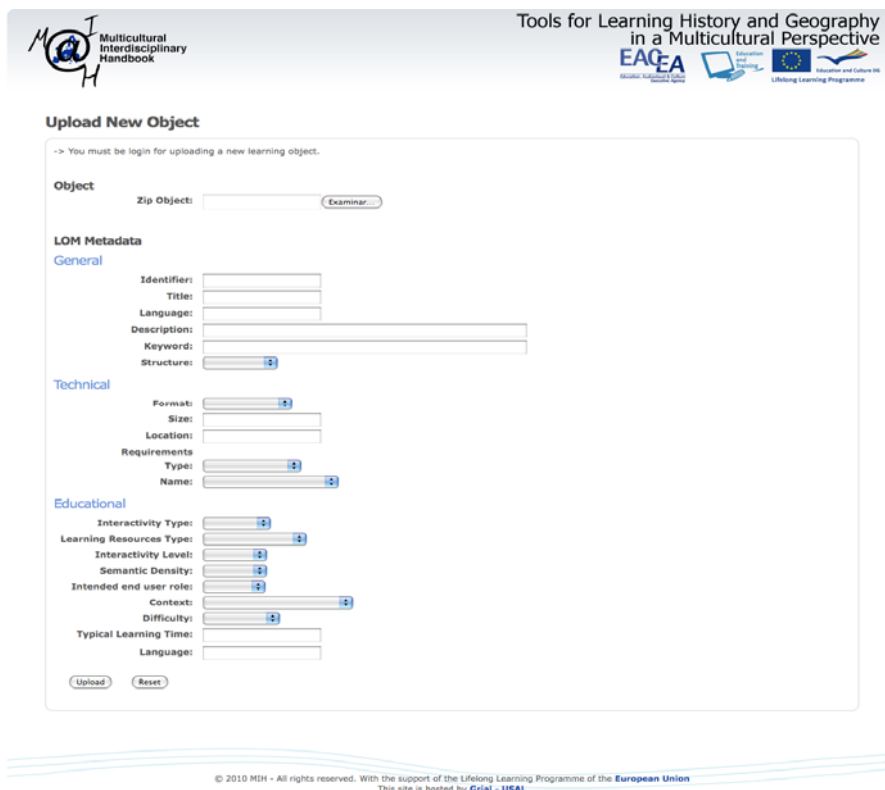


Figure 4 Upload form (see online version for colours)



The handbook will be available for download clicking a link under the EU flag in the initial view of the environment. In this view there will also be an access to the interface from which learning objects are uploaded to the system. To access that interface, the user must have logged in previously. Once logged into the platform, the user has to fill in a form with the LO compressed in zip format and a series of metadata following the IEEE LOM standard. This way, the object uploaded is richer and its classification and eventual retrieval easier. Once the form has been successfully filled in, the system will process the object with the aim of extracting a list of the multimedia elements it has so that the user can later access each of them individually.

Each LO is associated to a technical sheet, as shown in Figure 5, composed of two different sections. The first section shows the metadata filled in when it was uploaded and the second gives the user the option to download the complete LO or some of the multimedia elements it has. When a user accesses an object, the technical sheet is always shown and, once there, the user has to click ‘Start Learning’ to continue to the LO.

Figure 5 Object technical sheet (see online version for colours)

Designer Toys

LOM Metadata

General

Identifier: 541
 Title: Designer Toys
 Language: ES
 Description:
 Keyword: toys, art, designer, vinyl, kidrobot, dummy
 Structure: atomic

Technical

Format: text/html
 Size: 47903430
 Location: http://antia.fis.usal.es/mapMIH/objects/541/scorm
 Requirements
 Type: Browser
 Name: Any

Educational

Interactivity Type: Mixed
 Learning Resources Type: Questionnaire
 Interactivity Level: low
 Semantic Density: medium
 Intended end user role: learner
 Context: Vocational Training
 Difficulty: very easy
 typicallearningtime: 30 minutes
 Language: ES

Start Learning

Downloads

- Zip object: **Designer Toys**
- Multimedia resources:
 - Kidrobot Munny Audio (MP3)
 - London (Quicktime)
 - Visita al parque (JPG)
 - Tarde de playa (JPG)
 - Navidad (JPG)
 - Escapada (JPG)

© 2010 MIH - All rights reserved. With the support of the Lifelong Learning Programme of the European Union
 This site is hosted by Grial - USAL

5 Conclusions

Although the MIH Project is just starting its research activities, we were able to confirm the needs for some kind of new learning tools and methodologies for history and geography with a multicultural, CLIL and ICT approach. In the age of Google Maps and Google Earth, the possibilities for developing multimedia, interactive and multicultural learning contents allow us to build materials with a new methodological approach. After setting up the state of the art of the learning materials actually used by pupils in Europe, we will develop the main structures of this methodology, which will guide us through the main historical and geographical facts and contents in order to show different, multilingual and multicultural perspectives in the same learning content (that is particularly interesting regarding the history of Europe). This will be enriched by new ways of presenting history and geography, using audio and video clips, maps, documents, studies and statistics in a very attractive format.

We expect to explore and experience new methods and to find a very interesting approach to renew some learning contents regarding history and geography with these perspectives: multicultural, CLIL, ICT.

Acknowledgements

With the support of the Lifelong Learning Program of the European Union Project Reference: 502461-LLP-1-2009-1-ES-COMENIUS-CMP. This project has been funded with support from the European Commission. This publication only reflects the views of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Also, this work is partially supported by the Regional Council of Education of Junta de Castilla y León through the project GR47.

References

- Bodea, C-N., Dascalu, M. and Coman, M. (2010) 'Quality of project management education and training programmes', *International Journal of Knowledge Society Research*, Vol. 1, No. 2, pp.13-25.
- Eurydice (2006) *Content and Language Integrated Learning at School in Europe*, Eurydice, Brussels.
- Herder, J.G. (1966) *Outlines of a Philosophy of the History of Man*, Bergman, New York.
- IEEE LOM (2002) *Standard for Learning Object Metadata*, ANSI/IEEE, available at <http://ltsc.ieee.org/wg12/>.
- Jesukiewicz, P. (2009) *SCORM® 2004 4th edition. Content Aggregation Model (CAM). Version 1.1*, Advanced Distributed Learning (ADL), Alexandria, VA, USA.
- Morales, E., García-Peñalvo, F.J. and Barrón, Á. (2007) 'Improving LO quality through instructional design based on an ontological model and metadata', *Journal of Universal Computer Science*, Vol. 13, No. 7, pp.729-738.
- Moreno, F. and Bailly-Baillièrè, M. (2002) *Diseño Instructivo de la Formación on-line. Aproximación Metodológica a la Elaboración de Contenidos*, Ariel Educación, Barcelona, Spain.

- Polsani, P. (2003) 'Use and abuse of reusable learning objects', *Journal of Digital Information*, Vol. 3, No. 4.
- Welsch, W. (1999) 'Transculturality – the puzzling form of cultures today', in M. Featherstone and S. Lash (Eds.): *Spaces of Culture: City, Nation, World*, pp.194–213, Sage, London.
- Wiley, D.A. (2000) 'Learning object design and sequencing theory', Unpublished Doctoral Dissertation, Brigham Young University, Provo, UT.
- Zangrando, V., García-Peñalvo, F.J. and Seoane, A.M. (2010) 'Multicultural interdisciplinary handbook (MIH): tools for learning history and geography in a multicultural and ICT perspective', in M.D. Lytras, P. Ordoñez de Pablos, D. Avison, J. Sipior, Q. Jin, W. Leal, L. Uden, M. Thomas, S. Cervai, and D.G. Horner (Eds.): *Technology Enhanced Learning: Quality of Teaching and Educational Reform*, pp.374–378, Springer, Berlin, Heidelberg.